



City of Vancouver
Sustainability Bond
Annual Information Update
October 2024

Use of Proceeds and Projects Updates (2021 Sustainability Bond)



Project Name	Capital Budget Item	Description	Eligible Criteria	Allocation from 2021 Sustainability Bond	Completion Date (Current Stage %)	Amount drawn from 2021 Sustainability Bond	2024 Updates (as of Sep 2024)
Renewal of Sunset Yard	Civic facility renewal projects	The Sunset Nursery and Operations Yard master plan design locates the new buildings at the edges of the site, leaving the middle of the site for the works yard and heavy machinery. This strategy creates a buffer for the surrounding residential neighborhood and facilitates free movement within the site for fleet and staff. Nursery operations are located on the west side of the site, and the new Park Operations building is placed on the east side. Its position, lengthwise across the site and parallel to the arena, allows for unobstructed views across the works yard. It also provides views from the operations building into the works yard itself. Upgrades are required to accommodate: 13,000 sf new operations building that includes offices, change rooms, and workshops. 23,500 sf new greenhouse building including headhouse. New works yard including staff and fleet parking.	Green Buildings	\$9,000,000	52%	\$4,648,572	Construction of the new Works Yard Operations Building is well under way and is expected to be completed by the end of May 2025. The building is designed to be net zero carbon, certified to the Passive House standard, 100% electric, and low in embodied carbon. High-level planning is complete for the replacement of greenhouses and the construction of the low-carbon energy system. KPIs are not available yet.
Firehall #12 Seismic Upgrades	Civic facility renewal projects	Approximately \$6M is allocated to provide for the seismic upgrade of Fire Hall # 12 in Kitsilano community located at 8th Ave. & Balaclava St. in Vancouver. This fire hall was selected because it is in the right age group (approximately 30 years old) and covers a relatively large geographic area (west of Arbutus Street) where no fire hall meets current seismic standards. Structural seismic upgrade of Fire Hall 12 to meet an "Enhanced" retrofit level. Additionally, any building systems and elements that are impacted by the seismic upgrade work and determined to be end-of-life will be replaced. Potentially, building improvements that would positively improve or enhance energy performance could also be undertaken. Enclose mezzanine level overlooking apparatus bay for separation and move door between the entry and the vestibule so that bays can be separated from the downstairs functions (office, kitchen, recreation room). Currently in detailed design phase; proceeding to construction phase by the end of 2021.	Access to basic infrastructure	\$5,844,000	94%	\$5,518,793	The project was substantially completed in Feb 2024. It included multiple work scopes of work to improve energy performance, such as replacing roof insulation, windows, gas stove and furnace with electrical units. Existing mezzanine and office were separated from the Apparatus Bays, which improved energy consumption.
Streeg & Bridge Infrastructurs	Sidewalk Rehabilitation & Pedestrian Curb Ram & Bike Signal Program	Pedestrian curb ramp program - Installation of curb ramp across the City's sidewalk network to improve accessibility and availability of the active transportation network Sidewalk rehabilitation - Keep the City's sidewalks in a state of good repair and encourage residents to walk thereby helping the City achieve its overall transportation targets Pedestrian & bike signal rehabilitation - Maintain proper working condition for pedestrian and bike signal, ensuring rehabilitation and technology improvement. This technological resource allows the traffic, and data monitoring team to survey, collect, and analyze patterns to implement safer traffic flow strategies	Clean Transportation; Access to basic infrastructure	\$6,855,530	77%	\$5,254,975	Built 112 ramps in 2023 and plan to build 160 more by the end of 2024. Constructed 1.85 km of sidewalk in 2023.

Use of Proceeds and Projects Updates (2021 Sustainability Bond) Cont'd



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Accessibility Program	Facility renovation and upgrades programs	<p>The Accessibility Program is a City-wide program to improve accessibility in civic facilities, particularly for highly utilized public venues. Special consideration must be given to ensure civic facilities are barrier-free as well as be open and welcoming to all citizens. Universal and inclusive design involves everything from handicapped accessibility, to an understanding of the multicultural citizen base, and the LGBTQ2+ community. The City has taken significant steps forward on inclusive-focused recommendations, continuing to move towards equality for all. To ensure the City achieves the greatest impact for accessibility outcomes and future planning, a Feasibility Study was completed by a consultant. The scope of this study involves reviewing existing Accessibility Audits of 30 City-owned facilities, including City Hall, to identify and prioritize work required to renovate, upgrade and remove barriers and to improve accessibility and provide universal and inclusive design. As part of this work, the City and its consultant, HCMA, are currently engaging representatives from PWDAC and SAC as well as the Transgender community, and staff from other departments (who are working on various aspects of accessibility across the City), to develop a 'prioritization matrix'. The suggested recommendations and improvements coming from the Feasibility Study are then prioritized through this matrix with the top priority projects then executed.</p>	Access to essential services	\$2,080,000	Completed (100%)	\$2,080,000	<ul style="list-style-type: none"> • Feasibility and accessibility study of 31 public-facing buildings completed in 2021 • City Hall washrooms and selected accessibility upgrades completed in 2021 • Mountain View Cemetery accessibility audit completed in 2022 • Gathering Place accessibility upgrades for second-floor washrooms and shower completed in 2022 • West End Community Centre fitness center accessibility upgrades completed in 2022 • Carnegie accessibility washroom upgrades completed in 2024
Climate Emergency Response Program	Facility renovation and upgrades programs	<p>The Climate Emergency Action Plan is part of the city's initial implementation of accelerated action initiatives and integration of six "Big Move" sustainability objectives into Vancouver Plan and is a multi-faceted program that focuses on delivering services through various groups:</p> <p>Transportation Planning Studies: Focusing on increased active travel, transit reliability, reduced emissions/noise, increased road reallocation, efficient and effective planning, development, and review process</p> <p>Transport Pricing: 5 Year planning including assessment of feasibility of transport pricing in the metro core of Vancouver</p> <p>Active Transportation Promotion: Promoting active transportation, reduce GHG emissions, and improve the road network such that the City can continue to track towards the Climate Emergency Action Plan target (by 2030, two thirds of all trips in Vancouver will be made by foot, bike or transit).</p>	Clean Transportation; Access to basic infrastructure	\$2,025,000	94%	\$1,903,684	<p>Project planning is underway for all active transportation and transit workstreams related to Big Move 2 in CEAP. The School Active Travel Program continues to encourage walking, biking, and rolling to and from school with many significant initiatives taking place in the 2023-24 school year. Three elementary schools joined School Travel Planning Program, four elementary schools participated in the School Streets Program, three joined the Walking School Bus Program, and one operated a weekly bike bus throughout the spring.</p> <p>Additionally, 28 schools received Walk Bike Roll Mini-Grants to support student-led active travel initiatives, reaching approximately 4,960 students. Thirty-six schools participated in grade 6 & 7 cycling education courses, reaching 3,796, and 57 schools participated in Bike to School Week.</p> <p>In 2024, the \$20 Youth Community Pass was extended to four secondary schools in partnership with Mobi by Rogers, making bike-sharing more accessible. One hundred seventy-seven students signed up for the discounted pass. The City of Vancouver also partnered with the Vancouver School Board to fund 17 bike racks and six scooter racks that were distributed to schools. A bi-directional bike lane was installed near Lord Roberts Elementary School on 1600 Comox Street, between Bidwell and Cardero Streets.</p> <p>Lastly, in March 2023, the City launched the School Speed Reduction Pilot, reducing speed limits to 40 km/h on arterial streets and 30 km/h on collector streets in nine elementary school zones during school hours or at all times to improve safety.</p>
Seawall Maintenance Program	Park Maintenance, renewal and upgrade programs	<p>Vancouver has the world's longest uninterrupted waterfront path. The 28 km Seaside Greenway is an uninterrupted pathway, including the Stanley Park Seawall, that extends from the Vancouver Convention Centre to Spanish Banks Park. Perfect for a walk, cycle, or jog, it is the most popular recreational spot in the city. The Seawall is divided in to two clearly marked sections - one for walkers and joggers (closest to the water), and one for cyclists and inline skaters (inside path).</p> <p>The seawall is subject to seasonal battering, as well as large storms, which cause damage and deterioration to the structure. Vancouver Park Board did a comprehensive assessment of the seawall in 2013 and 2016 to identify and prioritize the work for this restoration project. The Stanley Park Seawall restoration project includes filling holes, replacing stone, stabilizing foundations, and installing material to protect against water erosion at priority locations between Brockton Point and Sunset Beach.</p> <p>With deep foundations and renewed surfacing, the restored seawall can withstand the tides for many years to come.</p>	Clean Transportation; Climate Change Adaptation	\$1,101,250	69%	\$757,511	<p>Engineering manages over 10kmm of seawall assets, structural inspections and seawall rehabilitation construction projects, including concrete repairs at Coal Harbour, revetment repairs in False Creek and condition monitoring of Cambie sheetpile wall. The seawall pathway is used daily by many commuters, contributing to clean transportation.</p>

Use of Proceeds and Projects Updates (2023 Sustainability Bond)



Project Name	Capital Budget Item	Description	Eligible Criteria	Allocation from 2023 Sustainability Bond	Completion Date (Current Stage %)	Amount drawn from 2023 Sustainability Bond	2024 Updates (as of Oct 2024)
Neighbourhood Energy Utility (NEU) Distribution System Expansion	Neighbourhood Energy Utility	The NEU generates low carbon thermal energy at the False Creek Energy Centre, which is used to supply heat and domestic hot water to buildings connected to the NEU. The low carbon thermal energy is distributed in the form of hot water through a hot water distribution piping network. This program will see the installation of ~1.8 km of NEU distribution piping, expanding the NEU's low carbon thermal energy supply into the False Creek Flats and Mount Pleasant areas of the City of Vancouver where significant new development is planned.	Renewable Energy	\$8,829,324	51%	\$4,529,314	1.4km has been installed to date. Estimated completion date: Q4 2025
Firehall #9 Renewal & Expansion - Grandview Fire Hall	Replacement of existing civic facilities	Approximately \$41M is allocated to Fire Hall # 9 in Grandview Woodland neighbourhood located at 1805 Victoria Drive in Vancouver. A two-bay Fire Hall built in 1959 and an adjacent training square currently occupy the site. This 63-year-old building is currently assessed to be in poor/critical condition and to be nearing the end of its useful life. The adjacent training square allows for expansion of the hall. The existing facility was identified as high-risk in a Rapid Visual Seismic Screening through the City's Seismic program. Project objective is to replace the aging Fire Hall # 9 and expand Vancouver Fire and Rescue Services (VFRS), as well as to support operational synergies and improve City-wide coverage with the co-location of VF&RS Headquarters, Fire Investigations, and VF&RS DOC (Department Operation Centre) in one post-disaster building.	Access to affordable basic infrastructure - public safety services; Green Buildings	\$40,955,000	4%	\$1,597,318	The new fire hall 9 is aiming to achieve both Passive House Certification and LEED Certification. The design phase has been completed, and construction documentation is under preparation. The project is tentatively scheduled for completion in 2027.
Sewers main renewal & upgrades	Sewers	The City is working toward the Province of BC's environmental goal to eliminate sewage overflows by 2050. As the City replaces combined sewer systems with separated sewer systems, properties will also need to have separated sewer systems. By separating sanitary main which collects discharge from residential and commercial buildings to Iona Wastewater Treatment Plant and storm main which collects from rain, this will mitigate the risk of untreated combined sewer overflow and localized flooding through increased capacity during heavy rainfall seasons. The process will also replace aging pipes and increase capacity to accommodate future population growth, urban development growth, and potential climate change impacts. There are two sewer separation programs running concurrently.	Sustainable Water and Wastewater Management; Access to affordable basic infrastructure - Sewers	\$50,215,676	89%	\$44,880,448	Status (project specific): % of system that is separated: 57.8% (per 2024 Service Plan) length (km) of sewer pipe constructed (renewal) : 9.1km Environmental benefits: Eliminates combined sewer overflow; Prevents flooding by increasing capacity; Allows storm water to be used as a resource.

Completed Projects (Sustainability Bond)

Bond Program	Project Name	Capital Budget Item	Description	Eligible Criteria	Completion Year	Amount drawn from Sustainability Bond	Outcome
2021 Sustainability Bond	Sewer & Water Main Reconstruction	Sewer	This program replaces the sewer infrastructure from a combined system (single pipes that carry storm water and sewage mixed together) to a separated system (separate storm pipes and sanitary pipes), which provides a higher service level, reduces flooding risk and prevents combined sewage overflows into receiving water bodies.	Sustainable Water and Wastewater Management	2023	\$70,284,220	<p>Status (project specific): % of system that is separated: 55.2% (per 2022 Service Plan) length (km) of sewer pipe constructed (renewal) : 17.7km</p> <p>Environmental benefits: Eliminates combined sewer overflow Prevents flooding by increasing capacity Allows storm water to be used as a resource</p>
2021 Sustainability Bond	Energy Optimization Program	Facility renovation and upgrades programs	<p>The energy optimization program consists of building energy retrofit projects and building control optimization projects that reduce energy consumption and greenhouse gas emissions within city owned buildings. Project deliverables include consultant continuous optimization investigation reports, building control systems modifications, and construction of energy efficient lighting upgrades, HVAC energy retrofits, and renewable energy projects.</p> <p>To highlight one of the major projects we've been working on this year: Heating and Cooling System Replacement at the Vancouver Police Department Annex, located at 236 E Cordova (see image below)</p> <p>The chiller plant for 236 E. Cordova will be replaced with an air-source heat pump located on the roof to provide chilled water and heating water to the building. The heat pump will be able to switch from cooling to heating mode seasonally. A greenhouse gas reduction analysis was completed and it was determined that an annual GHG reduction of 77.3 Tonnes of CO2e could be achieved per year. Over the 25 year life expectancy of the systems proposed that results in a 1,932.5 Tonnes of CO2e reduction.</p>	Green Buildings	Q4 2023	\$2,810,000	<p>Zero Emissions Strategy: Natural gas fired boiler space heating and domestic hot heating system was replaced with an Aermec air source heat pump with electric boiler backup KPI's based on energy data from July 2022 to June 2023: EUI 95 kWh/m2-yr GHGI 1.4 kg/m2-yr</p>

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General	https://vancouver.ca
Greenest City Action Plan	https://vancouver.ca/greenestcity
Climate Emergency Action Plan	https://vancouver.ca/climateemergency
Investors Relations (including Sustainability Bond Framework and Second Party Opinion)	https://vancouver.ca/your-government/investor-relations.aspx
Budgets and Finances	http://vancouver.ca/your-government/budgets.aspx